IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re **PATENT** application of:

Applicant:	Taro KATAYAMA *et al.*	
Serial No.:	10/561,706	Art Unit: 2621
Filed:	June 2, 2006	
Title:	**DATA PROCESSING DEVICE AND DATA PROCESSING METHOD**	
Examiner:	Chikaodilie E. Anyikire	
Docket No.:	OKUDP0155US	

APPEAL BRIEF

Mail Stop: Appeal Brief - Patents
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U.S. Patent and Trademark Office
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Alexandria, VA 22313-1450

Sir:

This brief is submitted in connection with the appeal of the above-identified application. Credit card payment of the fee set forth in 37 C.F.R. §41.20(b)(2) is made in connection herewith. If there are any additional fees resulting from this communication, please charge the same to our Deposit Account No. 18-0988, our Docket No. OKUDP0155US.

I. Real Party in Interest

The real party in interest in the present appeal is Panasonic Corporation, assignee of the present application.

II. Related Appeals and Interferences

Appellants, Appellants' undersigned representative, and/or the assignee of the present application are unaware of any prior or pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by, or have bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1, 4-9 and 12-16 are in the instant proceeding and are pending in the application. Claims 2-3 and 10-11 have been canceled. Claims 1, 4-9 and 12-16 stand finally rejected and are the subject of this appeal.

IV. Status of Amendments

No amendments to the claims or specification have been made subsequent to the final rejection contained in the Final Office Action dated January 3, 2011.

V. Summary of the Claimed Subject Matter

Claims 1 and 9 represent the pending independent claims.

Claim 1:

Independent claim 1 recites a data processor (100) (application at page 33, lines 14-20; Fig. 7) for playing back video and audio from a data stream (TS) including video data (V) and audio data (A) (application at page 35, lines 4-12; Fig. 8), each of the video and audio data being provided with time information (VPTS, APTS) representing its presentation time (application at page 3, line 19 to page 4, line 3; page 30, lines 11-14; page 41, lines 13-20; Fig. 1(c)), the data processor (100) comprising:

a stream acquiring section (101) for acquiring a first data stream (TS1) and a second data stream (TS2) continuously (application at page 35, lines 6-12; Figs. 7-8);

an inserting section (102) for inserting boundary-setting dummy data (71) into a data location where the first (TS1) and second (TS2) data streams switch each other (application at page 36, lines 1-11; Figs. 7-8);

an analyzing section (103), which detects the dummy data (71), assigns different pieces of identification information (nv,na) to the first and second data streams (TS1,TS2), and associates the identification information (nv,na) with the video and audio data of each said data stream (application at page 38, line 6 to page 39, line 18; Figs. 15-16);

a control section (118) for controlling the respective output timings of video represented by video data and audio represented by audio data by reference to the time information (VPTS) of the video data and the time information (APTS) of the audio data that are associated with the same piece of identification information (nv,na) (application at page 40, line 8 to page 41, line 7; Fig. 18); and

an output section (117,110) for outputting the video and the audio at the output timings (application at page 64, lines 4-10),

wherein the control section (118) finds the respective presentation end times of the video and the audio (video_end_PTS, audio_end_PTS) of the first data stream (TS1) according to the time information (VPTS) added to the video data and the time information added to the audio data (APTS) (application at page 51, lines 4-14; Fig. 9), and

if the presentation end time of the audio (audio_end_PTS) is later than that of the video (video_end_PTS), the control section (118) stops outputting the audio from the presentation end time of the video (video_end_PTS) through the presentation end time of the audio (audio_end_PTS) (application at page 61, line 13 to page 62, line 6; Figs. 10 and 18; S402,S405), and

wherein the control section (118) finds the respective presentation start times of the video and the audio (video_start_PTS, audio_start_PTS) of the second data stream (TS2) according to the time information (VPTS) added to the video data and the time information (APTS) added to the audio data (application at page 51, lines 4-14; Fig. 9), and

if the presentation start time of the audio (audio_start_PTS) is earlier than that of the video (video_start_PTS), the control section (118) stops outputting the audio from the presentation start time of the audio (audio_start_PTS) through the presentation start time of the video (video_start_PTS) (application at page 44, line 13 to page 45, line 4; page 66, line 14 to page 67, line 14; Figs. 11 and 18; S408,S409).

Claim 9:

Claim 9 recites a data processing method for playing back video and audio from a data stream (TS) including video data (V) and audio data (A) (application at page 35, lines 4-12; Fig. 8), each of the video and audio data being provided with time information (VPTS,APTS) representing its presentation time (application at page 3, line 19 to page 4, line 3; page 30, lines 11-14; page 41, lines 13-20; Fig. 1(c)), the method comprising the steps of:

acquiring a first data stream (TS1) and a second data stream (TS2) continuously (application at page 35, lines 6-12; Figs. 7-8);

inserting boundary-setting dummy data (71) into a data location where the first (TS1) and second (TS2) data streams switch each other;

detecting the dummy data (71), assigning different pieces of identification information (nv,na) to the first and second data streams (TS1,TS2), and associating the identification information (nv,na) with the video and audio data of each said data stream (application at page 38, line 6 to page 39, line 18; Figs. 15-16);

controlling the respective output timings of video represented by video data and audio represented by audio data by reference to the time information (VPTS) of the

video data and the time information (APTS) of the audio data that are associated with the same piece of identification information (nv,na) (application at page 40, line 8 to page 41, line 7; Fig. 18); and

outputting the video and the audio at the output timings (application at page 64, lines 4-10),

wherein the step of controlling includes the steps of:

finding the respective presentation end times of the video and the audio (video_end_PTS, audio_end_PTS) of the first data stream (TS1) according to the time information (VPTS) added to the video data and the time information added to the audio data (APTS) (application at page 51, lines 4-14; Fig. 9), and

if the presentation end time of the audio (audio_end_PTS) is later than that of the video (video_end_PTS), stopping outputting the audio from the presentation end time of the video (video_end_PTS) through the presentation end time of the audio (audio_end_PTS) (application at page 61, line 13 to page 62, line 6; Figs. 10 and 18; S402,S405), and

wherein the step of controlling includes the steps of:

finding the respective presentation start times of the video and the audio (video_start_PTS,audio_start_PTS) of the second data stream (TS2) according to the time information (VPTS) added to the video data and the time information (APTS) added to the audio data (application at page 51, lines 4-14; Fig. 9), and

if the presentation start time of the audio (audio_start_PTS) is earlier than that of the video (video_start_PTS), stopping outputting the audio from the presentation start time of the audio (audio_start_PTS) through the presentation start time of the video (video_start_PTS) (application at page 44, line 13 to page 45, line 4; page 66, line 14 to page 67, line 14; Figs. 11 and 18; S408,S409).

VI. Grounds of Rejection to be Reviewed on Appeal

Claims 1, 4-9 and 12-16 stand rejected pursuant to 35 USC §103(a) as being obvious over *Takamori et al.*, U.S. Patent No. 6,041,067 (*Takamori et al.*) in view of *Suzuki*, U.S. Patent No. 5,808,722 (*Suzuki*).

VII. Argument

Claim 1 recites a data processor in which a control section finds the respective presentation end times of the video and the audio of the first data stream according to the time information added to the video data and the time information added to the audio data, and if the presentation end time of the audio is later than that of the video, the control section *stops* outputting the audio from the presentation end time of the video through the presentation end time of the audio (application at page 61, line 13 to page 62, line 6; Figs. 10 and 18; S402,S405). Moreover, the control section finds the respective presentation start times of the video and the audio of the second data stream according to the time information added to the video data and the time information added to the audio data, and if the presentation start time of the audio is earlier than that of the video, the control section *stops* outputting the audio from the presentation start time of the audio through the presentation start time of the video (application at page 44, line 13 to page 45, line 4; page 66, line 14 to page 67, line 14; Figs. 11 and 18; S408,S409).

Thus, the data processor of claim 1 *stops* outputting of the audio in the case where the presentation end time of the audio is later than that of the video in the first data stream, or in the case where the presentation start time of the audio is earlier than that of the video in the second data stream. In other words, the data processor of claim 1 processes the data under such circumstances *not* by synchronizing the audio and video but rather by *stopping* the outputting of the audio in the event the presentation end time of the audio is later than that of the video in the case of the first data stream, or in the event where the presentation start time of the audio is earlier than that of the video in the case of the second data stream.

The Examiner has acknowledged that *Takamori et al.* does not explicitly teach a control section finding the respective presentation end times of the video and the audio

of the first data stream according to the time information added to the video data and the time information added to the audio data, and wherein if the presentation end time of the audio is later than that of the video, the control section stops outputting the audio from the presentation end time of the video through the presentation end time of the audio as recited in claim 1. The Examiner similarly has acknowledged that *Takamori et al.* does not explicitly teach the control section stopping outputting the audio from the presentation start time of the audio through the presentation start time of the video if the presentation start time of the audio is earlier than that of the video as recited in claim 1. [OA dated July 29, 2010, pgs. 4-5].

On the other hand, the Examiner has taken the position that *Suzuki* makes up for the rather sizable deficiencies in *Takamori et al.*, and that it would have been obvious to one having ordinary skill to modify the teachings of *Takamori et al.* based on *Suzuki* so as to result in the claimed invention. As applicants previously argued to the Examiner, the rejection should be withdrawn/reversed for at least the following reasons.

Takamori et al. relates to a device for synchronizing data processing. Even more particularly, *Takamori et al.* teaches:

> *It is an object of the present invention to provide a device for synchronizing data processing, that can correctly detect boundaries of plural data sequences, each sequence comprising a series of data blocks having a coherent content, and that can process and output data included in the data sequences successively, in the temporal order, without skipping or delaying the processing. (Emphasis Added; Col. 6, lns. 18-24).*

Clearly, the intended purpose of the invention of *Takamori et al.* is to provide a device for synchronizing which does *not* skip or delay the processing of the data. As noted above, the Examiner has admitted that *Takamori et al.* does not teach such stopping of the processing but argues it would have been obvious to modify *Takamori et al.* based on *Suzuki* in order to do so.

However, applicants respectfully note that such modification would be directly contrary to the objective in *Takamori et al.* and hence would not be obvious to one

having ordinary skill. It is well settled that the proposed modification cannot render the prior art unsatisfactory for its intended purpose. [MPEP §2143.01(V.)] If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

The modification which has been proposed by the Examiner, namely modifying the invention of *Takamori et al.* to *stop* the outputting of data, would render the invention of *Takamori et al.* unsatisfactory for its expressly intended purpose, namely *not skipping or delaying* the processing.

Applicants therefore respectfully submit that the modification presented by the Examiner would not have been obvious and the rejection of claim 1 should be reversed. Similar comments apply with respect to corresponding method claim 9.

While the above arguments were presented to the Examiner in applicants' response to filed on October 27, 2010, they were rejected by the Examiner in the Final Office Action mailed on January 3, 2011, in which the Examiner stated:

> ***Response to Arguments***
>
> 2. Applicant's arguments filed October 27, 2010 have been fully considered but they are not persuasive.
>
> The applicant argues that Suzuki does not teach " wherein the control section finds the respective presentation end times of the video and the audio of the first data stream according to the time information added to the video data and the time information added to the audio data, and wherein if the presentation end time of the audio is later than that of the video, the control section stops outputting the audio from the presentation end time of the video through the presentation end time of the audio, wherein the control section finds the respective presentation start times of the video and the audio of the second data stream according to the time information added to the video data and the time information added to the audio data, and wherein if the presentation start time of the audio is earlier than that of the video, the control section stops outputting the audio from the presentation start time of the audio through the presentation start time of the video". The examiner respectfully disagrees. Suzuki teaches that a controller looks to the time information of the video data and the audio data to ensure that they are synchronized together (column 7 lines 1 - 10).

Thus, the Examiner maintained the rejection on the basis that "*Suzuki teaches that a controller looks to the time information of the video data and the audio data to ensure that they are synchronized together* (citing Col. 7, lns. 1-10)." In this regard, applicants pointed out to the Examiner that they *agreed* with the Examiner's understanding. Namely, applicants agreed with the Examiner that *Suzuki's* controller looks to the time information of the video data and the audio data to ensure that they are synchronized together.

Suzuki:

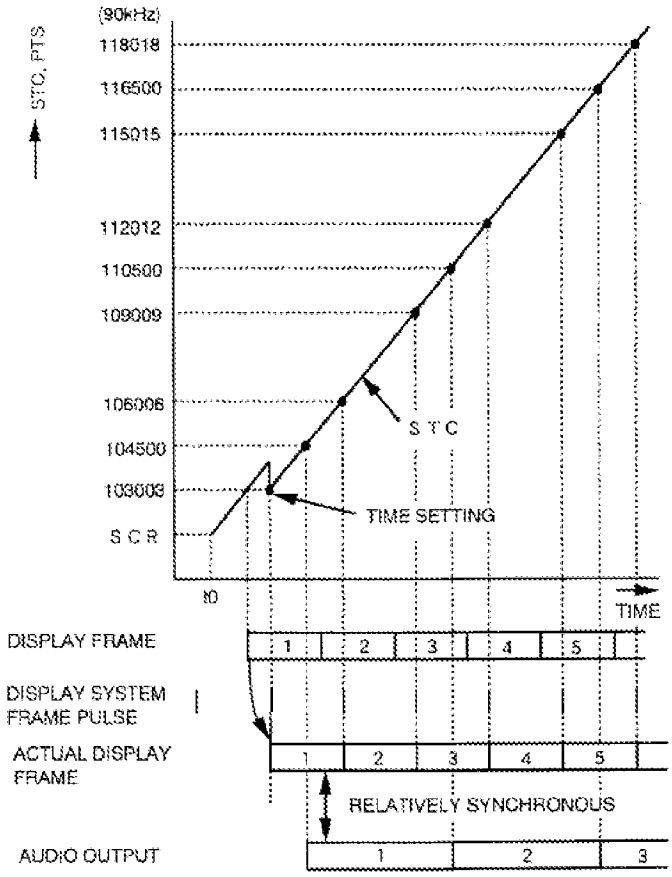

FIG. 2

For example, Fig. 2 of *Suzuki* (reproduced above) illustrates how the actual display frame (i.e., the video) and audio output are relatively synchronous. Therefore, consistent with the Examiner's and the applicants' understanding, *Suzuki* does teach

that the controller looks to the time information of the video data and the audio data to ensure that they are synchronized together.

However, applicants again respectfully submit that such action in *Suzuki* is contrary to that which is being claimed in claims 1 and 9. Claim 1 recites how if the presentation end time of the audio is later than that of the video, the control section *stops outputting the audio* from the presentation end time of the video through the presentation end time of the audio. Similarly, claim 9 recites the step of *stopping outputting the audio* from the presentation end time of the video through the presentation end time of the audio if the presentation end time of the audio is later than that of the video.

Suzuki purposely *does not stop* the audio output, as this enables the controller in *Suzuki* to maintain the video output and audio output relatively synchronous. As shown in Fig. 2 of *Suzuki* and discussed at column 7, lines 11-22, for example, audio data is output from the first frame having audio PTS "104500". The audio decoder 30 outputs the output audio data 31 completely synchronized with the system time clock (STC) 102. In other words, the output audio signal 31 is synchronized relatively and completely with the display video data 51. (Col. 7, lns. 12-22). The audio output in *Suzuki* is *not stopped* at all, else the audio output could not be synchronized as taught in *Suzuki*.

Applicants therefore again note that the data processor/method of claims 1 and 9 recite *stopping* outputting of the audio in the case where the presentation end time of the audio is later than that of the video, or in the case where the presentation start time of the audio is earlier than that of the video. Thus, the data processor/method of claims 1 and 9 process the data not by synchronizing the audio and video but rather by stopping the outputting of the audio in the event the presentation end time of the audio is later than that of the video, or the case where the presentation start time of the audio is earlier than that of the video.

The Examiner acknowledged that *Takamori et al.* does not explicitly teach a control section finding the respective presentation end times of the video and the audio

of the first data stream according to the time information added to the video data and the time information added to the audio data, and wherein if the presentation end time of the audio is later than that of the video, the control section stops outputting the audio from the presentation end time of the video through the presentation end time of the audio. Moreover, for the reasons expressed above *Suzuki* does not make up for the deficiencies in *Takamori et al.*

Still further, applicants note that claims 1 and 9 recite the condition of whether the presentation start time of the audio is earlier than that of the video. The Examiner relied on *Suzuki* at column 6, line 25 to column 7, line 10 as teaching the condition of the presentation start time of the audio being earlier than that of the video. However, applicants *do not find any such teaching* as purported by the Examiner. In fact, in their response to the Final Office Action applicants noted that should the Examiner maintain such teaching in *Suzuki*, it was requested that the Examiner point out such teaching in *Suzuki* with more particularity.

In the Pre-Appeal Brief Conference Request filed by the applicants, it was pointed out how applicants had responded to the Final Office action on May 2, 2011 without amendment to the claims. Rather the applicants responded with particularity what they perceived were the shortcomings in the Examiner's rejection. Applicants included in their response detailed analysis, and not merely conclusory statements. Their analysis specifically addressed what the Examiner had stated as the basis for the rejection. For example, applicants pointed out how:

(1) *Suzuki* purposely does not stop the audio output, whereas the claimed invention stops outputting the audio (Resp., p. 4); and

(2) The Examiner's reliance on *Suzuki* as teaching the condition of the presentation start time of the audio being earlier than that of the video is not supported at column 6, line 25 to column 7, line 10 as alleged by the Examiner. Applicants expressly requested that should the Examiner maintain such understanding, the Examiner point to where such teaching is in *Suzuki* with more particularity. (Resp., p. 5).

Applicants pointed out how in the Advisory Action, the Examiner merely repeated the language of the rejection made in the Final Office Action with the exception of a single additional sentence, namely:

> *The presentation end times are recognized by the values of presentation time stamp which taught (sic) by Suzuki.* (Advisory Action, sentence bridging pp. 2-3).

Applicants emphasized that this added statement by the Examiner was merely conclusory. Moreover, applicants pointed out that the Examiner's statement appeared in no way to be responsive to the noted distinctions argued by the applicants. As applicants pointed out to the Pre-Appeal Brief review panel, clearly it is not possible to move forward and reach resolution in the prosecution of an application if the applicant and examiner are not responsive to each other's arguments. Disappointingly, the panel merely indicated that the appeal would proceed to the Board of Appeals and Interferences.

Applicants respectfully request that the Board of Appeals and Interferences acknowledge the shortcomings of the rejection and reverse the Examiner's findings. Neither *Takamori et al.* nor *Suzuki*, whether taken alone or in combination, teach or render obvious the invention of claims 1, 9, and those dependent therefrom. Neither *Takamori et al.* nor *Suzuki* teach or render obvious the features where if the presentation end time of the audio is later than that of the video in the first data stream, the control section *stops* outputting the audio from the presentation end time of the video through the presentation end time of the audio; and if the presentation start time of the audio is earlier than that of the video in the second data stream, the control section *stops* outputting the audio from the presentation start time of the audio through the presentation start time of the video.

VIII. Claims Appendix

An appendix containing a copy of the claims involved in this appeal is attached to this brief.

IX. Evidence Appendix

An evidence appendix is attached, but identifies no items of evidence.

X. Related Proceedings Appendix

A related proceedings appendix is attached, but identifies no decisions.

Respectfully submitted,

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CLAIMS APPENDIX

1. A data processor for playing back video and audio from a data stream including video data and audio data, each of the video and audio data being provided with time information representing its presentation time, the data processor comprising:

a stream acquiring section for acquiring a first data stream and a second data stream continuously;

an inserting section for inserting boundary-setting dummy data into a data location where the first and second data streams switch each other;

an analyzing section, which detects the dummy data, assigns different pieces of identification information to the first and second data streams, and associates the identification information with the video and audio data of each said data stream;

a control section for controlling the respective output timings of video represented by video data and audio represented by audio data by reference to the time information of the video data and the time information of the audio data that are associated with the same piece of identification information; and

an output section for outputting the video and the audio at the output timings,

wherein the control section finds the respective presentation end times of the video and the audio of the first data stream according to the time information added to the video data and the time information added to the audio data, and

if the presentation end time of the audio is later than that of the video, the control section stops outputting the audio from the presentation end time of the video through the presentation end time of the audio, and

wherein the control section finds the respective presentation start times of the

video and the audio of the second data stream according to the time information added to the video data and the time information added to the audio data, and

if the presentation start time of the audio is earlier than that of the video, the control section stops outputting the audio from the presentation start time of the audio through the presentation start time of the video.

4. The data processor of claim 1, wherein when finding given video data and audio data associated with different pieces of identification information, the control section gets only the video represented by the video data output first, and

wherein when finding video data, obtained after the video has been played back, and the audio data associated with the same piece of identification information, the control section controls the output timings of the video represented by the video data and the audio represented by the audio data in accordance with the time information of the video data and the time information of the audio data that are associated with the same piece of identification information.

5. The data processor of claim 1, wherein the stream acquiring section is able to acquire three or more data streams continuously, and

wherein the inserting section inserts dummy data, which has monotonically increasing or decreasing values corresponding to the identification information, into every data location where associated two of the continuously acquired data stream switch each other.

6. The data processor of claim 5, wherein when finding the piece of identification information associated with the audio data agreeing with a piece of identification information associated with video data representing video that was output in the past, the control section stops outputting audio represented by the audio data and starts outputting audio represented by audio data having the same piece of identification information as that associated with the video data of the video being output currently.

7. The data processor of claim 1, wherein when finding the piece of identification information associated with the audio data agreeing with a piece of identification information associated with video data representing video that has not been output yet, the control section stops outputting audio represented by the audio data and does not start outputting the audio represented by the audio data until the piece of identification information agrees with a piece of identification information associated with video data acquired afterward.

8. The data processor of claim 1, wherein each said data stream has a packet structure including packets that store video data and packets that store audio data, and

wherein the inserting section inserts the boundary-setting dummy packet between the last packet of the first data stream and the first packet of the second data stream.

9. A data processing method for playing back video and audio from a data stream including video data and audio data, each of the video and audio data being provided with time information representing its presentation time, the method comprising the steps of:

acquiring a first data stream and a second data stream continuously;

inserting boundary-setting dummy data into a data location where the first and second data streams switch each other;

detecting the dummy data, assigning different pieces of identification information to the first and second data streams, and associating the identification information with the video and audio data of each said data stream;

controlling the respective output timings of video represented by video data and audio represented by audio data by reference to the time information of the video data and the time information of the audio data that are associated with the same piece of identification information; and

outputting the video and the audio at the output timings,

wherein the step of controlling includes the steps of:

finding the respective presentation end times of the video and the audio of the first data stream according to the time information added to the video data and the time information added to the audio data, and

if the presentation end time of the audio is later than that of the video, stopping outputting the audio from the presentation end time of the video through the presentation end time of the audio, and

wherein the step of controlling includes the steps of:

finding the respective presentation start times of the video and the audio of the second data stream according to the time information added to the video data and the time information added to the audio data, and

if the presentation start time of the audio is earlier than that of the video, stopping outputting the audio from the presentation start time of the audio through the presentation start time of the video.

12. The data processing method of claim 9, wherein the step of controlling includes the steps of:

when finding given video data and audio data associated with different pieces of identification information, getting only the video represented by the video data output first, and

when finding video data, obtained after the video has been played back, and the audio data associated with the same piece of identification information, controlling the output timings of the video represented by the video data and the audio represented by the audio data in accordance with the time information of the video data and the time information of the audio data that are associated with the same piece of identification information.

13. The data processing method of claim 9, wherein the step of acquiring includes acquiring three or more data streams continuously, and

wherein the step of inserting includes inserting dummy data, which has monotonically increasing or decreasing values corresponding to the identification

information, into every data location where associated two of the continuously acquired data stream switch each other.

14. The data processing method of claim 13, wherein the step of controlling includes the steps of:

when finding the piece of identification information associated with the audio data agreeing with a piece of identification information associated with video data representing video that was output in the past, stopping outputting audio represented by the audio data and

starting outputting audio represented by audio data having the same piece of identification information as that associated with the video data of the video being output currently.

15. The data processing method of claim 9, wherein the step of controlling includes the steps of:

when finding the piece of identification information associated with the audio data agreeing with a piece of identification information associated with video data representing video that has not been output yet, stopping outputting audio represented by the audio data and

not starting outputting the audio represented by the audio data until the piece of identification information agrees with a piece of identification information associated with video data acquired afterward.

16. The data processing method of claim 9, wherein each said data stream has a packet structure including packets that store video data and packets that store audio data, and

wherein the step of inserting includes inserting the boundary-setting dummy packet between the last packet of the first data stream and the first packet of the second data stream.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.